REMARKS

I.   Status of the Application

Claims 1, 2 and 11-24 are pending in this application. In the May 6, 2008 office action, the Examiner:

A.   Objected to claims 17, 22 and 23 due to informalities;

B.   Rejected claims 11-16 and 22 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite;

C.   Rejected claims 1-2, 11-12 and 22-24 under 35 U.S.C. § 103(a) as being allegedly being unpatentable over US Patent No. 5,757,795 to Schnell (hereinafter "Schnell") in view of US Patent No. 5,394,402 to Ross (hereinafter "Ross");

D.   Rejected claims 13-16 under 35 U.S.C. § 103(a) as being unpatentable over Schnell in view of Ross and further in view of US Patent No. 6,658,027 to Kramer et al. (hereinafter "Kramer");

E.   Rejected claims 17-18 under 35 U.S.C. § 103(a) as being unpatentable over Schnell in view of US Patent No. 7,154,899 to Khill (hereinafter "Khill");

F.   Rejected claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Schnell in view of Khill and further in view of Ross; and

G.   Rejected claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Schnell in view of Khill and further in view of Ross and Kramer et al.

In this response, applicant has amended claims 11-17, cancelled claims 22 and 23, and added new claims 25 and 26. Thus, claims 1, 2, 11-21 and 24-26 are now presented in the

application for further examination. Reconsideration of the application as amended and in view of the following remarks is respectfully requested.

II.   The Examiner's Objection to Claims 17, 22 and 23 Should be Withdrawn

Claim 17 stands objected to for containing a period, separating the claim into two sentences. In this response, claim 17 has been amended to correct this typographical error. In particular, the period has been replaced with a comma.

Claims 22 and 23 stand objected to for not depending on a preceding claim. In this response, claims 22 and 23 have been cancelled and reintroduced as new claims 25 and 26, which depend from claims 24 and 25, respectively.

In view of the amendments to claim 17 and the cancellation of claims 22 and 23, it is respectfully submitted that the examiner's objections to claims 17, 22 and 23 are now moot, and should be withdrawn.

III.   The Rejection of Claims 11-16 and 22-24 Under 35 U.S.C. § 112, Second Paragraph,
        Should be Withdrawn

Claims 11-16 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner argues that it is unclear what the applicant's intended meaning of the word "arrangement" is with respect to defining the claimed invention. Claims 11-16 have been amended to substitute the word "device" for

the word arrangement". Basis for this amendment can be found on page 3, lines 18-28 of the international publication.

Claim 22 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner argues that it is unclear whether Applicant intends a first port from claim 24 and a first port from claim 22 to be one and the same. Claim 22 has been cancelled, and therefore the examiner's rejection is moot. Applicant has also submitted new claim 25, which is similar to previously presented claim 22. However, new claim 25 recites that the plurality of ingress/egress ports includes a plurality of other ingress/egress ports.

In view of the foregoing amendments to claims 11-16, and 22, it is respectfully submitted that the examiner's rejections of claims 11-16 and 22-24 under 35 U.S.C. § 112, second paragraph, are now moot and should be withdrawn.

IV.   The Rejection of Independent Claims 1 and 24 Under 35 U.S.C. § 103(a) Should be
        Withdrawn

In the May 6, 2008 Office action, the examiner rejected independent claims 1 and 24 under 35 U.S.C. § 103 (a) as being unpatentable over Schnell in view of Ross. Applicant respectfully traverses this rejection.

In order to establish a *prima facie* case of obviousness, three basic criteria should be met as set forth in MPEP § 2143.01-2143.03. First, all claim limitations must be considered. MPEP § 2143.03. Second, there must be some suggestion or motivation to modify the

references or combine reference teachings. MPEP § 2143.01. Third, there must be a reasonable expectation of success. MPEP § 2143.02.

A. The References Do Not Teach or Suggest All Claim Limitations

In the present case, it is respectfully submitted that neither Schnell nor Ross teach or suggest all the limitations of claims 1 and 24. One example of a limitation of claim 1 that is not taught or suggested by the cited references is that of "address table construction means for generating a table containing associations between [i] ports of the switch and [ii] MAC addresses of any devices connected to the switch via those ports". Another example of a limitation that is not taught or suggested by the cited references is that of "**the address table construction means being operable to construct said table in respect of all but a first one of the ports**".

In the May 6, 2008 Office action, the examiner admitted that Schnell does not teach "the address table construction means being operable to construct said table in respect of all but a first one of the ports". However, the examiner argued that this limitation is disclosed in Ross. In particular, at page 4 of the May 6, 2008 Office action, the examiner argues the following:

> Ross discloses constructing a table containing associations between ports of the switch and MAC addresses in respect of all but a first port ("*Another function takes the form of means (MAC ADDR) 62 for determining the MAC addresses of each of end stations 20, 22, 24, 26, 28, 30, 32, 34, and 36 (and the MAC addresses of each of internal ports 12, 14, and 16 if such MAC addresses exist) and storing those MAC addresses in memory 42*" – See Col. 5, lines 61-66). Additionally, Ross discloses at Col. 4, lines 63-65 "*FIG. 1 shows a digital data communications network hub 10 in accordance with the invention having three internal*

ports 12, 14, and 16 and one external port 18." As Ross shows, the hub has a plurality of ports (internal ports 12, 14 and 16 – See Fig. 1) having several devices (end stations 20, 22, 24, 26, 28, 30, 32, 34, and 36 – See Fig. 1) connected thereto. The MAC addresses of these devices are stored into the memory. This is performed for all ports except with respect to a single port (external port 18 – See Fig. 1).

Contrary to the foregoing assertion by the examiner, Ross does not teach, disclose or suggest "address table construction means for generating a table containing associations between [i] **ports of the switch** and [ii] **MAC addresses of any devices connected to the switch via those ports**", much less that "**the address table construction means [is] operable to construct the table in respect of all but a first of one of the ports**". Ross merely discloses in col. 5, lines 61-66, on which the examiner relies, means (MAC ADDR) 62 for **determining** the **MAC addresses of each of end stations** 20, 22, 24, 26, 28, 30, 32, 34 and 36 **and** if such MAC addresses exist, the **MAC addresses of each of internal ports 12, 14 and 16** and storing these MAC addresses in memory 42. Determining and storing the MAC addresses of end stations and internal ports as disclosed in Ross is <u>not</u> the same as **generating a table** containing **associations** between **(i) ports of a switch** and **(ii) MAC addresses of any devices connected to the switch via those ports** as specified in claim 1. <u>It follows therefore that Ross does not disclose, teach or suggest an address table construction means operable to construct a table containing associations between ports of a switch and MAC addresses of any devices connected to the switch **via those ports "in respect of all but a first of one of the ports"** as claimed in claim 1.</u>

As set forth above, because the combination of Schnell and Ross does not teach, disclose or suggest all the features of claim 1, there is no rationale to support the conclusion

that claim 1 would have been obvious to one of ordinary skill in the art in light of Schnell and Ross. Thus, claim 1 is non-obvious over Schnell and Ross. Claim 24 is non-obvious over Schnell and Ross for similar reasons.

B. A Reasonable Expectation of Success Has Not Been Established

In order to establish a prima facie case of obviousness, the examiner must at least articulate a finding that there was reasonable expectation of success. See MPEP § 2143(G) and MPEP § 2143.02. However, in the May 6, 2008 office action, the examiner did not even attempt to establish such a finding of a reasonable expectation of success. Therefore, for at least this reason, the examiner has not made a prima facie case of obviousness, and the examiner's rejection under 35 U.S.C. § 103(a) should be withdrawn.

For all of the foregoing reasons, it is respectfully submitted that the examiner has not made a prima facie case of obviousness with respect to independent claims 1 and 24, and the examiner's rejection of independent claims 1 and 24 under 35 U.S.C. § 103(a) should be withdrawn.

V. The Rejection of Independent Claim 17 Under 35 U.S.C. § 103(a) Should be Withdrawn

In the May 6, 2008 Office action, the examiner rejected claim 17 under 35 U.S.C. § 103 (a) as being unpatentable over Schnell in view of Khill. Applicant respectfully traverses this rejection.

In order to establish a *prima facie* case of obviousness, three basic criteria should be met as set forth in MPEP § 2143.01-2143.03. First, all claim limitations must be considered. MPEP § 2143.03. Second, there must be some suggestion or motivation to modify the references or combine reference teachings. MPEP § 2143.01. Third, there must be a reasonable expectation of success. MPEP § 2143.02.

A. The References Do Not Teach or Suggest All Claim Limitations

In the present case, it is respectfully submitted that neither Schnell nor Khill teach or suggest all the limitations of claim 17. One example of a limitation of claim 17 that is not disclosed in Schnell or Khill is that of "stopping generation of the table before MAC addresses of at least some devices operably coupled through the first ingress/egress port are associated with the first ingress/egress port in the table". In the May 6, 2008 Office action, the Examiner admitted that Schnell does not teach this limitation. The examiner then relied on Khill as disclosing this limitation.

Khill discloses in col. 1, lines 59-67, on which the examiner relies, that a learning process observes the source addresses of frames received on **each** port (i.e. all the ports), and dynamically updates a filtering database by creating or updating an entry in the filtering database, associating the port on which the frame was received with the frame's source MAC address. If the filtering database is filled to capacity when a new entry is to be created, **an existing entry is removed to make room for the new one.** In other words, the new entry is still entered into the filtering database and the filtering database continues to be generated. Accordingly, there is no disclosure in col. 1, lines 59-67 of Khill of stopping generation of a

table as claimed in claim 17. Khill discloses in col. 4, lines 14-17, on which the examiner relies, that the learning process carried out by a virtual bridge is limited to modifying only a portion of the shared filtering database in the learning period. This is elaborated on in col. 5, line 40 to col. 6, line 47 of Khill, portions of which are relied on by the examiner in the office action. In particular, Khill discloses a MAC bridge 10 that uses a budgeted learning process 12 to inhibit DOS attacks on a filtering database 14. The MAC bridge 10 has ports 16 and 18 connected to LAN segments 20 and 22. The MAC bridge 10 monitors traffic on ports 16 and 18 and transfers frames destined for MAC addresses outside one of the LAN segments to the other LAN segment. Information enabling proper functioning of the frame forwarding process is stored in filtering database 14, which is typically shared among a number of different VLAN domains. **The learning process 12 monitors the source addresses of packets received on ports 16 and 18 (i.e. all the ports), in order to add entries as appropriate to database 14.** A learning budget is assigned to each VLAN domain served by the MAC bridge 10. During a learning period, each time the learning process receives a packet in a given domain with an unknown source address, it tests whether it has exhausted its budget of entries for the domain. If the budget is not exhausted, learning process 12 adds a new entry into database 14. **If the budget of entries is exhausted, the learning process terminates for this domain until the current learning period is over**, without adding the entry to the filtering database. In other words, Khill teaches stopping generation of a table when a learning budget is exhausted, and not **before** MAC addresses of at least some devices operably coupled through a first ingress/egress port are associated with the first ingress/egress port in the table as claimed in claim 17. Accordingly, since the combination of

Schnell and Khill does not teach, disclose or suggest all the features of claim 17, there is no rationale to support the conclusion that claim 17 would have been obvious to one of ordinary skill in the art in light of Schnell and Khill. Thus, claim 17 is non-obvious over Schnell and Khill.

In addition to the above, Applicant further emphasizes that each of Schnell, Ross and Khill teach the use of **all** ports to build up the address table. By contrast, in the present application, **one of the ports is completely excluded** from the process of building up the address table. Each of the ports that is included in the process of building up the MAC address lookup table is only connected to a limited number of devices. Therefore, there is a limited number of MAC addresses (DA) associated with this port. This reduces the size of the memory required for such lookup table storage and thus helps to reduce the cost of the device. The port (LAN Port) that is excluded from the address look-up table build-up is typically hooked up to the wider local area network. Accordingly, in the event the device receives packets that do not match any destination address (DA) - port association stored in the lookup table, the packets are forwarded to the LAN port that was excluded from the table build up process. The foregoing advantage is clearly not contemplated in Schnell, Ross or Khill. Furthermore, each of claims 1, 17 and 24 include limitations related to this point, as discussed above. Thus, Applicant maintains that there is **no** rationale to support the conclusion that a combination of Schnell with either Ross or Khill would render the claims obvious.

B.   A Reasonable Expectation of Success Has Not Been Established

In order to establish a prima facie case of obviousness, the examiner must at least articulate a finding that there was reasonable expectation of success. See MPEP § 2143(G) and MPEP § 2143.02. However, in the May 6, 2008 office action, the examiner did not even attempt to establish such a finding of a reasonable expectation of success in rejecting claim 17 under 35 U.S.C. § 103(a). Therefore, for at least this reason, the examiner has not made a prima facie case of obviousness, and the examiner's rejection under 35 U.S.C. § 103(a) should be withdrawn.

For all of the foregoing reasons, it is respectfully submitted that the examiner has not made a prima facie case of obviousness with respect to independent claims 1 and 24, and the examiner's rejection of independent claims 1 and 24 under 35 U.S.C. § 103(a) should be withdrawn.

VI.   The Rejection of Dependent Claims 2, 11-16 and 18-21 Should be Withdrawn

Dependent claims 2, 11-16 and 18-21 all depend from and incorporate all the limitations of one of independent claims 1 or 17. Moreover, each of these dependent claims includes additional novel and non-obvious limitations. Accordingly, it is respectfully submitted that dependent claims 2, 11-16 and 18-21 are also allowable for at least the same reasons that independent claims 1 and 17 are allowable, as well as additional reasons. Therefore, the examiner's rejection of claims 2, 11-16 and 18-21 should be withdrawn.

VII.   Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicant has made a patentable contribution to the art. Favorable reconsideration and allowance of this application is therefore respectfully requested.

While applicant has traversed a number of the examiner's assertions in this response, the fact that applicant may not have specifically traversed any particular assertion by the Office should not be construed as indicating applicant's agreement therewith.

In the event applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

Respectfully submitted,

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